El-Moasser Final Examinations

Model Exam 1

1 (A) Choose the correct answer :

1. Toy cars need energy to do all the following functions, except ....
   a. moving forward and backward. b. rotation in a circle.
   c. moving right and left. d. rotation around the moon.
2. Sand is formed due to breaking down of ....
   a. glass. b. wood. c. rocks. d. plastic.
3. Among forms of fuel that present in car fuel stations are ....
   a. gasoline and wood. b. natural gas and coal.
   c. wood and coal. d. gasoline and natural gas.
4. All of the following are examples of renewable energy resources, except ....
   a. fossil fuel. b. waterfalls. c. wind. d. sunlight.

(B) What happens if .... ?

Lichens growing on rocks produce acids.

2 (A) Put (✓) or (X) :

1. You need gasoline to move a bicycle. ( )
2. A solar panel consists of one small solar cell. ( )
3. Most of energy chains start with the moon. ( )
4. We cannot create a new form of energy, and also we cannot destroy an existed form of energy. ( )

(B) Correct the underlined word :

1. Deltas are formed by weathering process. (..........................)
2. Dunes are lowland areas which have gently sloped sides. (..........................)

3 (A) Write the scientific term for each of the following :

1. A device used to convert electrical energy into light energy. (..........................)
2. Natural resources of energy, that take a short period of time to be renewed. (..........................)
3. A natural movement of air that is resulted from the difference in temperature between cold and hot air. (..........................)
4. The energy produced from a battery. (..........................)

(B) Give a reason for the following :

We must turn off lights that we are not needed for a while.

....

Model Exam 2

1 (A) Choose the correct answer :

1. The input energy when using the hair dryer is the .... energy.
   a. electrical b. potential c. kinetic d. thermal
2. Water flows through turbines in dams to generate .... energy.
   a. electrical b. potential c. solar d. light
3. Fossil fuels need .... to be formed under the Earth's surface.
   a. five years b. ten years
   c. hundreds of years d. millions of years
4. The steps of forming fossil fuel, don't include .... of the remains of the living organisms.
   a. decaying b. cooling c. burying d. heating

(B) Give a reason for the following :

Iron inside rocks may rust.

....

....

2 (A) Complete the following sentences :

1. Both .... and .... are used to grind grains to make flour hundreds of years ago, but now we use them to generate ....
2. In any energy chain, some of the energy is lost in the form of ....
3. Wood and .... are examples of biofuel, while .... and .... are examples of fossil fuel.
4. When you ride a bicycle, the .... energy stored in your body is converted into .... energy which cause the bicycle to move.

(B) What happens if ... ?

A river erodes the sediments of a mountain over a long period of time.

....

....

3 (A) Correct the underlined words :

1. When the water of a river travels downhill on a steep slope, its speed decreases. (..........................)
2. The valleys have steep slope. (..........................)

Part 2

(B) Look at the following figures, then put (√) or (x) :


car (1)


car (2)

1. The movement of the two cars can be controlled from a distance by using a remote control. ( )
2. Car (2) use sunlight to move. ( )
3. The two cars can convert the chemical energy stored in their batteries into electrical energy. ( )
4. We can use an electric cable to recharge the battery that is placed in car (1) again if it runs out. ( )

Model Exam 3

1 (A) Choose the correct answer :

1. All the following are processes that can change the Earth's surface, except ....
   a. digestion. b. erosion. c. weathering. d. deposition.
2. Electric wires are made of ....
   a. copper. b. carbon. c. wood. d. glass.
3. All the following are forms of fuel, except ....
   a. wood. b. natural gas. c. gasoline. d. glass.
4. The Sun provides us with .... and ....
   a. sound – heat. b. light – electricity.
   c. sound – light. d. heat – light.

(B) Give a reason for the following :

The used amount of fossil fuel cannot be replaced as quickly as it is consumed.

....

2 (A) Correct the underlined words :

1. Curiosity is a robotic vehicle that is designed to explore the surface of moon. (..............)
2. Hydroelectric energy, is one of non-renewable energy resources. (..............)

3. Small solar panels are used to supply one light bulb with sound energy. (..............)

4. Toy cars depend on fuel as a source of electrical energy. (..............)

(B) What happens if ... ?

You turn on an electric fan. (according to the change of energy)

....

3 (A) Choose from column (B) what suits it in column (A) :

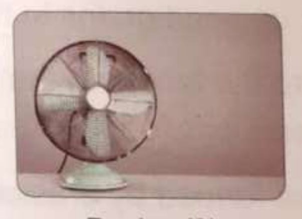
(A)	(B)
1. Water 2. Wind energy. 3. Coal. 4. The Sun	a. It needs extreme heat and pressure to be formed from remains of dead plants. b. It is the main resource of energy of the Earth's surface. c. It is gaseous renewable resource of energy. d. It is a liquid renewable resource of energy. e. It is a solid renewable resource of energy.

1. .... 2. .... 3. .... 4. ....

(B) Look at the following figures, then complete the following sentences :


Device (1)


Device (2)


Device (3)


Device (4)

1. The electrical energy used to operate devices number .... , ... and ....
2. Kinetic energy is produced in devices .... and ....

Model Exam 4

1 (A) Choose the correct answer :

1. All the following are renewable energy resources, except ....
   a. waterfalls. b. coal. c. the Sun. d. wind.
2. Hydroelectric energy is generated from ....
   a. waterfalls only. b. waterfalls and dams.
   c. biofuel only. d. biofuel and fossil fuel.
3. Both hair dryer and electrical water kettle produce .... energy.
   a. chemical b. thermal c. light d. potential

Part 2

4. Some electric devices need .... energy to be recharged.
   a. electrical b. thermal c. potential d. sound

(B) Give a reason for the following :

Plants of wetland areas help in formation of deltas.

....

2 (A) Write the scientific term of each of the following :

1. A process in which water changes into water vapour. (..................)
2. The liquid that stores chemical energy, and it is used to move cars. (..................)
3. A fuel that is produced from remains of dead animals and plants under the Earth's surface. (..................)
4. It is a device that produces light from electricity. (..................)

(B) What happens if ... ?

The charge of remote controlled toy car batteries is running out.

....

3 (A) Put (✓) or (✗) :

1. Wind can pick up sand grains in forming sand dunes. (   )
2. Sand dunes are the landform that can be seen in both beach and sandy desert. (   )
3. Sand dunes are formed by erosion only. (   )
4. Sand travels for a short distance when wind blows with a great force. (   )

(B) Complete the following table :

	Used energy	Produced energy
1.	.... energy	Light energy and .... energy
2.	.... energy	.... energy

Model Exam 5

1 (A) Choose the correct answer :

1. When you use the hand bell, the .... energy changes into sound energy.
   a. light b. thermal c. kinetic d. electrical
2. Using convergent .... sheets in cooking food is one of the benefits of using the solar energy.
   a. paper b. plastic c. mirror d. wooden
3. River water evaporates by the help of heat produced from ....
   a. kettles. b. the Sun.
   c. electric heaters. d. electric iron.
4. Extreme heat and pressure under the Earth's surface has an important role in forming ....
   a. wood. b. wind. c. fossil fuel. d. biofuel.

(B) What happens to ... ?

The car fuel indicator if the amount of gasoline in a car decreases.

....

....

2 (A) Put (✓) or (✗) :

1. Deposition process never change the shape of the land. ( )
2. There is a stored chemical energy inside the food we eat. ( )
3. Machines make our life more easier. ( )
4. We have to conserve all forms of fuel. ( )

(B) Give a reason for the following :

Sunlight is very important for plants and animals.

....

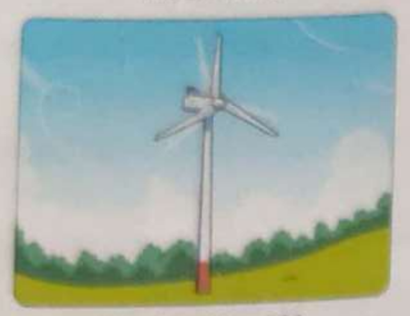
....

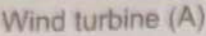
3 (A) Complete the following sentences :

1. When we expose our bodies to the Sun we feel ....
2. The energy can be .... from one form to another.
3. Sediments are mixed with the remains of .... and .... forming layers at the bottom of oceans and lakes.
4. Blowing of strong .... in the desert may form large sand dunes.

(B) If the two wind turbines in front of you are affected by the different wind forces. Answer the following questions :

Weak wind





Wind turbine (A)

Strong wind



Wind turbine (B)

1. Which wind turbine spins faster ? (Give a reason for your answer).

....

....

2. Which wind turbine generates less electrical energy ?

....

Model Exam 6

1 (A) Choose the correct answer :

1. When a river meets a sea or an ocean, a landform known as .... is formed.
   a. canyon b. volcano c. mountain d. delta
2. Oil is a non-renewable energy resource that is used inside a ....
   a. flash light. b. car engine. c. electric fan. d. washing machine.
3. It takes several .... for a spacecraft to travel from Earth to Mars.
   a. seconds b. minutes c. days d. months
4. You feel warm when you rub your hands together, because .... energy changes into thermal energy.
   a. kinetic b. light c. electrical d. sound

(B) What happens if ...?

Sea creatures were buried under the Earth's surface over millions of years.

....

2 (A) Correct the underlined words :

1. Watermill turbines generate electricity by using the energy of wind movement. (..............)

2. Moon is the main source of energy on Earth. (..................)

3. We need sound energy that comes from the Sun, for cooking foods and warming houses. (..................)

4. Fossil fuel include oil, coal and wood. (..................)

(B) Give a reason for the following :

Biofuel is considered as a renewable fuel.

....

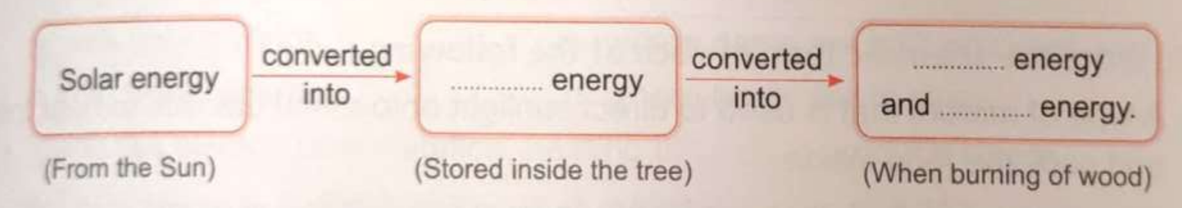
3 (A) Put (✓) or (✗) :

1. Both canyons and valleys often have river in their bottom. ( )
2. The walls of valleys are vertical and steep. ( )
3. Deltas are formed as a result of silt deposition. ( )
4. The Nile River pour its water in the Red Sea. ( )

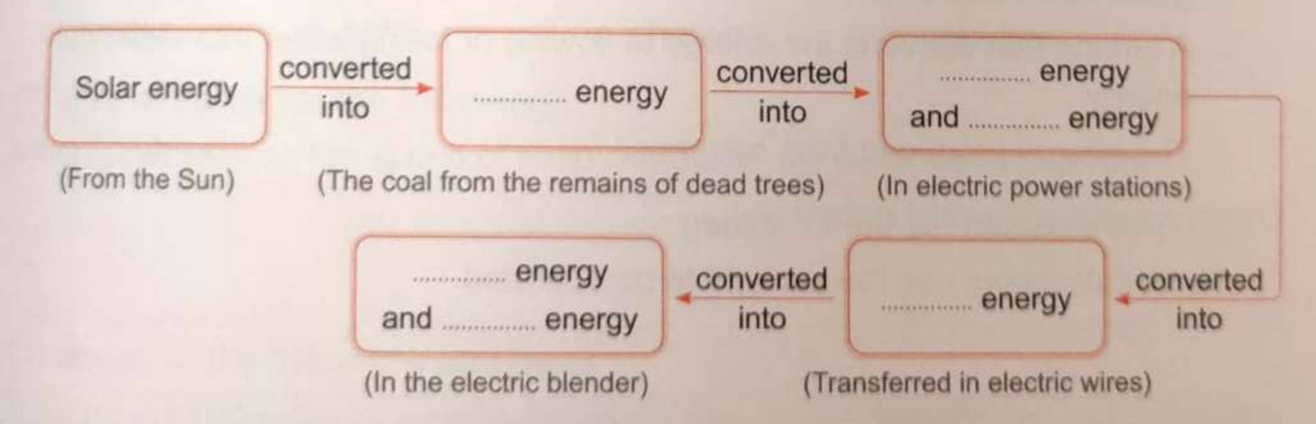
(B) Use the following words to complete the energy chains below. (you may use the same word more than once) :

(Thermal – Chemical – Kinetic – Electrical – Sound – Light)

1. The energy chain of burning some branches of a tree :



2. The energy chain of electric blender.



Part 2



Model Exam 7

1 (A) Choose the correct answer :

1. 40 million years ago, Wadi Al-Hitan was covered by ....
   a. rocks.   b. sand.   c. sea.   d. mud.
2. Sound and .... energies are from output energies when operating the mobile phone.
   a. electrical   b. potential   c. chemical   d. light
3. We can use the energy obtained from burning of wood directly in all of the following situations, except ....
   a. warming houses.   b. operating television.
   c. cooking food.   d. boiling water.
4. When land and water areas on Earth absorb the solar energy, the .... increases.
   a. temperature on Earth   b. speed of rotation of Earth
   c. speed of rotation of moon   d. speed of rotation of Sun

(B) What happens if ...?

The kinetic energy of wind applied to the wind turbines decreases.

....

2 (A) Write the scientific term of each of the following :

1. A type of mirrors that is used to direct sunlight onto metal utensils to heat them and cook the food inside. (..........)
2. It is a form of biofuel, that can be made from some types of plants such as grass and wood chips. (..........)
3. A turbine that converts the energy of flowing or falling water into electrical energy. (..........)
4. The energy produced from batteries. (..........)

(B) Give a reason for the following :

Some calculators use the sunlight to be operated.

....

3 (A) From your understanding of how electricity is generated in electric power stations. Put each of the following words in front of its suitable sentence :

1. Its movement produces kinetic energy. (..........)
2. It changes kinetic energy into electrical energy. (..........)

3. It is a type of nonrenewable resources of energy. (..............)
4. It is resulted from heating the water and it turns turbines. (..............)

(B) Look at the opposite picture, then complete the following sentences.

1. The name of this glass building is ....
2. The idea of working of this building depends on collecting the .... energy coming from the Sun.
3. The received energy is converted into .... energy that warms the inside of this building.
4. In the cold regions, this building allows farmers to plant crops that only grow in .... climates.

Model Exam 8

1 (A) Choose the correct answer :

1. Some kinetic energy is converted into .... energy due to friction of bike's tire with the road.
   a. light b. electrical c. potential d. thermal
2. Using water to generate electricity depends on places ....
   a. with strong winds. b. where dams are built on rivers.
   c. with weak winds. d. where boats sail in rivers.
3. Inside the electric power station, heating of .... produce steam.
   a. turbines. b. generators. c. water. d. fuel.
4. While playing guitar, the .... energy changes into sound energy.
   a. kinetic. b. light. c. chemical. d. potential.

(B) Give a reason for the following :

When you press on the spring of soap dispenser, the soap moves upward.
(according to the change of energy)

....

(A) complete the following sentences :

1. There are two types of weathering which are .... weathering and .... weathering.
2. Dams control the flow of .... , that causes the increase of the .... energy of water.

3. In some villages, solar panels are used to generate .... energy that is used to operate .... equipment.

4. Sand dunes are in continuous motion due to the movement of ....

(B) What happens if ... ?

You turn on the T.V. (according to the change of energy)

....

....

3 (A) Give one example for each of the following :

1. A renewable resource of energy : ....
2. A non-renewable resource of energy : ....
3. A method of conserving fossil fuel : ....
4. A disadvantage of using fossil fuel in energy production : ....

(B) Look at the following figures, then complete the following energy chain :



Figure (1)



Figure (2)

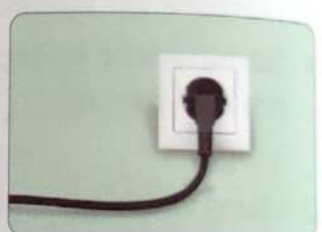


Figure (3)



Figure (4)



Figure (5)

Energy in figure .... → converted into → Chemical energy stored in figure .... → converted into → Thermal energy and kinetic energy in figure .... → converted into → Electrical energy that is travelled through figure .... → converted into → Thermal energy that is produced from the device in figure ....

Model Exam 9

1 (A) Choose the correct answer :

1. The output energy when playing drums is the .... energy.
   a. chemical b. light c. sound d. potential
2. If the rain falls over a canyon for several times per year, ...
   a. its depth increases. b. its depth decreases.
   c. it becomes flat. d. it is not be affected.
3. When the windmill blades rotates, this causes wind turbines to rotate and generating .... energy.
   a. electrical b. solar c. chemical d. potential
4. All the following are forms of fossil fuel, except ....
   a. water. b. coal. c. natural gas. d. oil.

(B) What happens if ...?

A generator in an electric power station is damaged.

....

....

2 (A) Put (✓) or (X) :

1. Energy may be destroyed inside different devices. ( )
2. Grinding of biscuits by hands into fine powder has the same effect of mechanical weathering of rocks. ( )
3. The movement of a generator in electric power stations produces potential energy. ( )
4. The amount of oil on Earth is limited. ( )

(B) Write the scientific term of each of the following :

1. Process in which rocks are broken down into smaller particles. (........................)
2. Process in which small broken rocks move from a place to another by the help of wind or water. (........................)

(A) Complete the following sentences :

1. The origin of sand is the breaking down of some types of ....
2. The type of weathering in which the rocks are broken down due to the presence of plant roots is known as .... weathering.

3. The change of electrical energy into sound energy in the radio is an example that proves the law of ....
4. The natural resources that can be replaced shortly after being used are called .... resources of energy.

(B) Mention the input and output energies of the opposite device :

1. Input energy : ....
2. Output energy : ....

Model Exam 10

1 (A) Choose the correct answer :

1. Which of the following is a renewable energy resources ? ....
   a. Running bicycle.
   b. Running car.
   c. Running water.
   d. Running person.
2. Curiosity rover is designed to explore ....
   a. Earth planet. b. Mars planet. c. the Sun. d. the moon.
3. The change of energy in an .... is opposite to the change of energy in a wind turbine.
   a. electric bell b. electric heater c. electric iron d. electric fan
4. All the following factors play an important role in the formation of fossil fuel, except ....
   a. extreme pressure.
   b. extreme heat.
   c. the moon light.
   d. rocks and sediment.

(B) Give a reason for the following :

Coal is considered as a nonrenewable energy resource.

....

2 (A) Write the scientific term of each of the following :

1. The matter that produces steam on heating, which is used to turn turbines in electric power station. (..................)
2. A mill that is turned by water flow. (..................)
3. Process in which the sediments are dropped in a new location by the action of wind, water, ice and gravity. (..................)
4. The energy used to play a drum. (..................)

(B) What happens if ...?

You put your hands near the lighted lamp.

....

....

3 (A) Correct the underlined words :

1. The amount of biofuel that is consumed, cannot be replaced as quickly as it is used. (..................)
2. Dams are built on rivers in order to generate solar energy. (..................)
3. The origin of sand is the breaking down of some types of glass. (..................)
4. Plant roots help in the formation of rocks. (..................)

(B) Look at these electric devices, then complete the following sentences :



Device (1)


Device (2)


Device (3)

1. Sound and light energies are produced in the device number .... and help it to do its function.
2. Kinetic energy is produced in devices number .... and ....
3. Noise from devices number .... and .... is wasted energy, because sound doesn't help the devices do their functions.
4. All of these devices are operated by .... energy that is transmitted from .... stations through wires.

PART 3

Model Examinations

El-Moasser Final Examination Models

Model Exam 1

1 (A) 1. d 2. c 3. d 4. a
(B) Minerals of rocks dissolve causing their breaking down.

2 (A) 1. (✗) 2. (✗)
3. (✗) 4. (✓)
(B) 1. deposition 2. valleys

3 (A) 1. Electric bulb.
2. Renewable resources of energy.
3. Wind.
4. Electrical energy.
(B) To conserve the electricity.

Model Exam 2

1 (A) 1. a 2. a 3. d 4. b
(B) Due to the reaction between iron and oxygen of air.

2 (A) 1. windmills – watermills – electricity.
2. heat.
3. charcoal – oil – coal
4. chemical – kinetic
(B) A canyon is formed.

3 (A) 1. increases 2. gentle
(B) 1. (✓) 2. (✗)
3. (✓) 4. (✗)

Model Exam 3

1 (A) 1. a 2. a 3. d 4. d
(B) Because fossil fuel is formed over millions of years.

2 (A) 1. Mars. 2. renewable
3. electrical 4. batteries
(B) Electrical energy changes into kinetic energy.

3 (A) 1. d 2. c 3. a 4. b
(B) 1. (2) – (3) – (4)
2. (3) – (4)

Model Exam 4

1 (A) 1. b 2. b 3. b 4. a
(B) Because they help in increasing the rate of deposition process.

2 (A) 1. Evaporation.
2. Gasoline.
3. Fossil fuel.
4. Electric bulb.
(B) We can recharge its batteries by connecting toy car to a nearby charger or replacing old batteries with new ones.

3 (A) 1. (✓) 2. (✓)
3. (✗) 4. (✗)
(B) 1. Solar – thermal
2. Kinetic – Electrical

Model Exam 5

1 (A) 1. c 2. c 3. b 4. c
(B) We have to stop at the nearest gas station to fill the tank of the car.

2 (A) 1. (✗) 2. (✓)
3. (✓) 4. (✓)
(B) Because without sunlight plants will die, and then the animals that eat them will die also.

3 (A) 1. warm. 2. changed
3. plants – animals
4. wind
(B) 1. (B), because it is affected by strong wind.
2. (A)

Model Exam 6

1 (A) 1. d 2. b 3. d 4. a
(B) Oil and natural gas are formed.

2 (A) 1. water flow. 2. Sun
3. solar 4. natural gas.
(B) Because it can be replaced shortly after it is used.

3 (A) 1. (✓) 2. (✗)
3. (✓) 4. (✗)
(B) 1. Chemical – Thermal – light
2. Chemical – Thermal – Kinetic – Electric – Kinetic – Sound

Model Exam 7

1 (A) 1. c 2. d 3. b 4. a
(B) The amount of produced electricity will decrease.

2 (A) 1. Concave mirrors.
2. Liquid fuel.
3. Water turbine.
4. Electrical energy.
(B) Because sunlight is converted into electrical energy which calculators use it to be operated.

3 (A) 1. Turbine 2. Generator
3. Coal 4. Steam
(B) 1. greenhouse. 2. radiant
3. thermal 4. warm

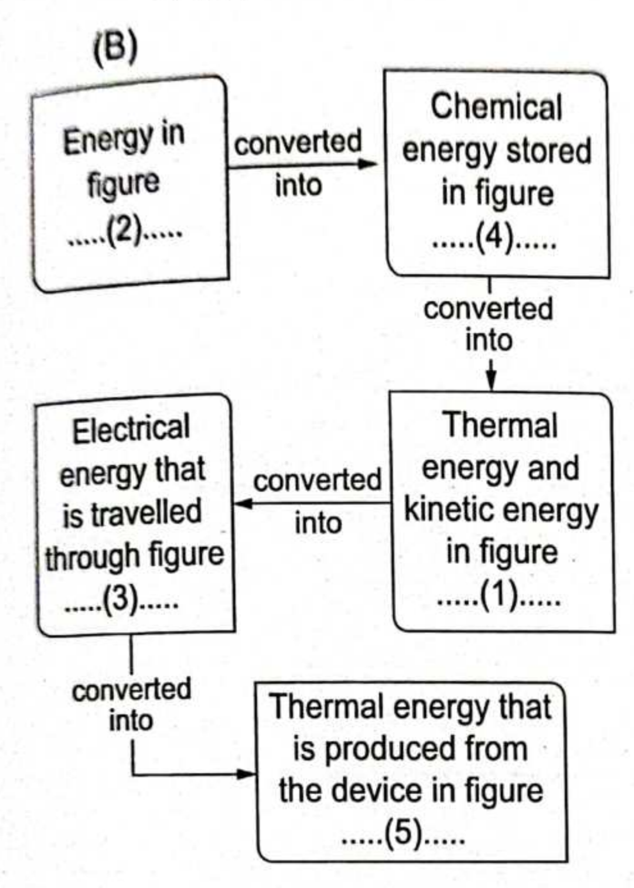
Model Exam 8

1 (A) 1. d 2. b 3. c 4. a
(B) Because the potential energy stored in the spring changes into kinetic energy that moves the soap upward.

2 (A) 1. mechanical – chemical
2. water – potential
3. electrical – irrigation
4. wind.
(B) The electrical energy is converted into sound energy and light energy.

3 (A) 1. The Sun. 2. Coal.
3. Walking or biking instead of driving a car.
4. Air pollution.

(B)



Model Exam 9

1 (A) 1. c 2. a 3. a 4. a
(B) It will not produce electrical energy.

2 (A) 1. (✗) 2. (✓)
3. (✗) 4. (✓)
(B) 1. Weathering 2. Erosion

3 (A) 1. rocks. 2. mechanical
3. conservation of energy.
4. renewable

(B) 1. Electrical energy.
2. Thermal energy.

Model Exam 10

1 (A) 1. c 2. b 3. d 4. c
(B) Because it is used at a rate faster than it can be renewed.

2 (A) 1. Water. 2. Watermill.
3. Deposition.
4. Kinetic energy.
(B) You feel warm, because some electrical energy is converted into thermal energy.

3 (A) 1. fossil fuel 2. electrical
3. rocks
4. decomposition
(B) 1. (2) 2. (1) – (3)
3. (1) – (3)
4. electrical – electric power